

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number  
**WO 2005/040564 A1**

(51) International Patent Classification<sup>7</sup>: F01M 1/02,  
3/04, F16N 7/38

(21) International Application Number:  
PCT/DK2004/000745

(22) International Filing Date: 28 October 2004 (28.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
PA 2003 01582 28 October 2003 (28.10.2003) DK

(71) Applicant (for all designated States except US): HANS JENSEN LUBRICATORS A/S [DK/DK]; Smedevænget 3, DK-9560 Hadsund (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): NIELSEN, Ib,

Helmer [DK/DK]; Frederiksgade 71, DK-9700 Brønderslev (DK).

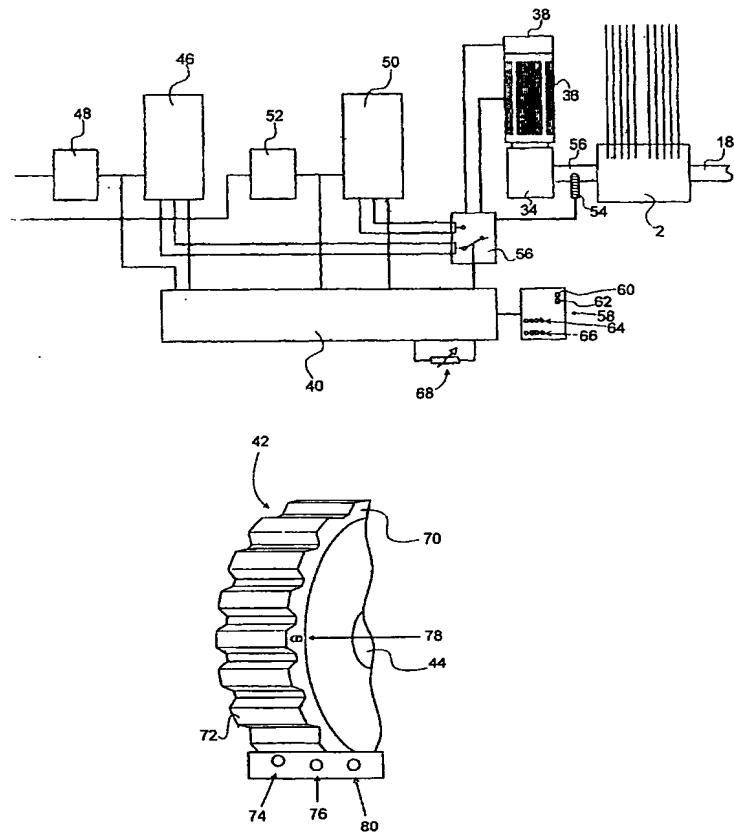
(74) Agent: PATRADE A/S; Fredens Torv 3A, DK-8000 Århus C (DK).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: CENTRALISED LUBRICATION OF LARGE DIESEL ENGINES



(57) Abstract: There is described a centralised lubrication system and a method for lubricating the cylinder faces in large diesel engines, in particular marine engines. The system includes at least one lubricating apparatus (2) having a rotating control shaft (18) for preferably running synchronously with the main shaft (44) of the diesel engine. In order to make a system that does not have a mechanical drive between the lubricating apparatus (2) and the main shaft (44), the system is constructed with an AC motor (36) driving the control shaft (18). Reference means (72, 78) are provided in association with the main shaft (44), indicating the angular position of the main shaft, and sensor means (74, 76, 80) detecting the position of the reference means. Furthermore, the system includes a control unit (40) receiving signals from the sensor means and which includes means for detecting angular position as well as angular speed of the reference means and thereby of the main shaft (44). The control unit (40) is connected with and controls the AC motor (36) for regulating the rotation of the control shaft (18) and thereby actuation of reciprocating pumps providing the cylinder lubrication.



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*